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THE GENESEE FARMER.

SATURDAY, APRIL 19, 1834.

The Grain Worms.

Vibrio tritici.

We have heretofore published,* from the Penny Magazine, two communications, from F. BAUER, on the diseases of grain denominated *pepper-brand* and *dust-brand.* We now give an abstract of a third communication from the same gentleman, on the disease of wheat known in England under the different names of *corn cockle, purples,* and *burnt corn,* the *Agrostima githago* of Linnæus. We are induced to believe, that the disease, or insect, described below, is identical with that which has done much injury in Scotland, in the eastern states, and in the northern and middle parts of this state. The nature and habits of this insect, as described by Mr. Bauer, seem to be different from that known here, and yet we think a further and more careful examination will prove them to be the same. Mr. B continued his observations and experiments from 1807 down to 1823, at which latter period the results were communicated to the Royal Society, and published in its Transactions. We proceed to our extracts:

"From continued supplies of fresh specimens from Kent, I have been enabled to ascertain many important facts respecting the nature and properties of the minute animals engendering this disease. These experiments and results were so far satisfactory as to establish incontestibly the fact, that the white fibrous substances within the cavities of the distorted grains, consist of real organized animals, endowed with the extraordinary property of having their power of motion suspended for a considerable length of time, and of having it again restored by the mere application of water. But how are these animals introduced into the cavities of the young gumens? and how are they propagated? These were questions which I could not at first answer, and I considered that these facts could only be ascertained by tracing the worms from the sowing of the seed corn through the whole progress of the vegetation of the plant.

"Being fully convinced that the worms or their eggs, like the seeds of the fungi of the pepper brand and dust brand, must be absorbed by the germinating seed corn, and propelled by the circulating sap into the young gumens, and reflecting that I had successfully inoculated the wheat grains with the fungi, I determined to try the same experiment with these worms; accordingly I selected a sufficient number of sound wheat grains, and extracting a small portion of the worms from the cavities of the infected grains, (which had previously been soaked in water about an hour) and placing some in the grooves of the posterior side of the sound grains, I left them for some days to get dry, and planted them in the ground on the 7th Oct. At the same time I plant-

* Vol. 3, pages 252 and 286.

ed some sound wheat grains in separate holes, about two inches deep, and in each hole two or three infected grains also. About the middle of Nov. most of the seeds had come up, and from time to time I took some of these young plants for examination, but did not perceive any effect of the inoculation till the 3d December, when, out of nine plants, five proved to be infected with live worms. In the first plant, after carefully splitting the young plant from the root upwards, I found in the then unorganized substance, between the radicle and the plumula, three young worms very lively, but not much larger than those with which the seed corn was inoculated; in another plant I found one full sized worm, but no eggs about it; in the third plant I found a still larger worm than the last, but in dividing the stem I had cut the worm in two, and it soon died; it seemed to be full of eggs: in the other two plants I found some worms quite young, and some half grown; but on the other four plants the inoculation had no effect. The fact that, at such an early stage of the inoculation of these seed grains, such large worms were found, confirms my first supposition, that it requires several generations of these worms to introduce their eggs into the young gumens; the large worms found in the substance of the young stem were undoubtedly some of the original worms with which the seed corn was inoculated, for they were on the point of laying their eggs in that stage, and these eggs, being again propelled by the rising sap a stage further, then come to maturity, and again lay their eggs, and thus progressively reach the elementary substance of the ear, when they are finally deposited in the then forming gumens; the whole progress requiring three or four such productions."

Mr. B. then describes many subsequent examinations of infected plants, referring to the representations and descriptions in the plates accompanying his communication.

"My experiments, for resuscitating the grain worms, I have repeated almost every succeeding year to this day, and always with the same success; but I find that the longer the specimens are kept dry, the grains require to lay in water a greater length of time before the worms will recover; and that, at every repetition of an experiment, a smaller number of worms recover their motion, and that after the same specimens had been kept dry six years and one month, the worms were all really dead.

"That this disease is contagious, is sufficiently proved by the fact, that it can at pleasure be inoculated on the soundest seed corn. The infection, however, is not so generally or successfully communicated as the disease occasioned by the fungi of the smut balls or dust brand, a few infected ears of which are capable of contaminating and infecting the whole contents of a barn. Grains infected with these worms having no embryos, cannot vegetate and produce again diseased grains themselves, but can only communicate the infection by coming in contact with the germinating seed corn in the soil, by the moisture by which the worms are received and extricate themselves, which I have so often observed they do when kept some time in water.

"Steeping the seed corn in lime water, in the same manner as advised for preventing the diseases occasioned by the fungi, is the most efficacious method of preventing the spreading of this disease. I have repeated the experiment by inoculating, very strongly, sound wheat grains with the worms, and afterwards steeping them in lime water, and the infection was always prevented; I have also steeped some sound wheat grains in lime water, and after having kept them in a dry state some days, I inoculated them strongly with the worms; but on examining the plants, not one instance of infection occurred. From these facts it is evident, that properly steeping the seed corn in lime water before sowing, is a sure preventive of the disease occasioned by grain worms."

Review of Thacher's American Orchardist.

We recommend the following paragraph to the particular attention of orchardists. If the farmer should plead in excuse for neglecting those directions, the pressure of other business,—we hope to prevail at least with the cultivators of fruit gardens; and that they will have the experiment in some shape, fairly and faithfully tried. We think that no preparation however, is better than *common lime white-wash.* A strong lye, which some of our neighbors have used, gives the bark a finer polish, but not a more healthy appearance; and we have seen no reason for preferring it to lime. It is not so conveniently applied.

"To promote the health and vigor of fruit trees, Mr. *Forsyth* recommends the following method; and it has been practiced in our country with the most decided advantage. Take any quantity of urine and soap-suds, and add fresh cow dung, and a little slacked lime, sufficient to bring it to the consistence of very thick white-wash or paint. After having removed all cankery parts, and scraped off the rough bark or moss from the trees, this mixture is to be applied to the stems and branches with a brush, in the same manner as the ceiling or walls of a room are white-washed. This if done in March or April aunually, will effectually destroy the eggs of insects, and prevent moss from growing on the trunk and branches; it will also contribute to the nourishment of the tree, and render its bark healthy, so that in the course of the first or second summer, a fine new bark of a fresh and green appearance, takes the place of the old one. If this application be repeated in autumn, after the fall of the leaves, it will have a salutary tendency to destroy the eggs of numerous insects that hatch in autumn and winter. For the same purpose as *Forsyth's* mixture, white-washing with lime has been practiced, and found very beneficial in producing similar good effects. The application of strong, undiluted soft soap is employed by Mr. *Ogden* of Flushing, Long Island. The soap, applied by means of a brush, destroys the moss and softens the bark; and when washed off by rain, acts as a manure to the roots. When Mr. *O.* began this process, his trees were covered with moss and old scaly bark, and bore bad crops; but in two years all the old bark dropped off, and the trunks became as smooth as a young poplar. The soaping may be done at any season, and repeated if necessary."

Dr. T. says a correspondent of the Caledonian Horticultural Society, recommends *clay paint.* We have tried it, and have no disposition to repeat the experiment. The first rain that came, washed most of it from the trees.

Our author quotes *Marshall* for the following statement: "I have seen healthy bearing apple trees which now *wear their second tops.* The first tops being *worn out* were cut off, and the stump saw-grafted." We have no taste for grafting into stumps, believing that the business may be much better managed by following the directions of a writer in our second volume at page 140; but we entirely approve of *changing old limbs for new ones* as fast as the former become cankered or stunted. For the want of such care, we have seen many old orchards in a state of rapid decline. We remember an apple tree, which when we last saw it, was nearly one hundred years old—the only survivor of many that were planted at the same time. Its limbs had a brittleness not possessed by the others; one storm after another, had blown off its old branches, and

thrifty shoots were allowed to rise in their places. In this way, it had survived all its cotemporaries. By the judicious application of *the saw* and *the paint brush*, orchards may be rendered much more durable, and larger fruit of finer flavor, would unquestionably result from the practice. We have seen some farmers cut out *the thrifty shoots* which *ought to be preserved*, and retain *the stunted branches* which *ought to be removed*.

From Dr. *Mease*, our author makes the following quotation:

"By accident Mr. *Cooper* of New Jersey, discovered some years since, that a tree upon which a number of iron hoops and other articles of iron had been hung, remained free from blight, while all the rest suffered severely. Since that year he has constantly encircled two or three branches of every tree with an iron hoop, and with uniform success. As a proof he pointed out one tree with a withered limb near the top, and observed that he had neglected to defend it last year. Philosophers may speculate as to the theory of the operation of the iron, and cause of the blast; but practical men will be contented with a knowledge of the important fact, which comes from a man of judgment and of an observing disposition, who has again and again satisfied himself that no deception or accidental circumstance occurred, by reference to which the preservation of his hooped trees could be accounted for."

We suppose (in the absence of any further information) that the *pear tree* was referred to, and that the disease was the *fire blight*. We would not discourage those who need a remedy in such cases, from repeating the experiment, although we confess it has the aspect of quackery. We only wish to caution our readers, should the tree become healthy, against being deceived. There is something *seemingly capricious* in the nature of fire blight; and we have seen trees that had suffered for years, suddenly relieved without any apparent cause for so desirable a change. There can surely be no harm in hanging the branches with old iron; but should any improvement in the condition of the tree, follow,—we hope it will not be taken for granted that no other cause could have operated. If it can be *clearly* traced to the old iron—well and good—it would prove a most important discovery; but more than one or two experiments would be necessary to satisfy us on that point.

Lest we should be thought too sceptical in this matter, vouched as it is by such respectable authority, we will further remark that this proposed remedy has been known for thirty years; and yet we have not been able to obtain one well authenticated instance of its efficiacy from any other quarter. We do not assert that no such instances are known,—for many cultivators think themselves under no obligation to communicate what they discover, to the public,—but it is doubtful if any such case can be produced. *Coxe's View of the cultivation of Fruit Trees* was published many years after this remedy for the FIRE BLIGHT had been proposed, and *in the same neighborhood*; and though he has treated of this malady, he has not given that remedy even a passing notice.

(*To be continued.*) V.

HORTICULTURE.—We have received the copy of Judge Buel's Lecture on Horticulture, recently delivered before the Young Men's Association of Albany, which we shall publish next week.

ERRATUM.—Page 98, column 2, line 2 from the *bottom* of 3d paragraph, for *subsoil* read *soil*.

Vernal Flowers.

[*In a letter of the 1st instant to the Publisher.*]

Since the date of my last, we have had both winter and spring in frequent succession; and only a small addition has been made to our list of flowers. At present, the season is more backward by several days, than that of last year.

My earliest variety of the Primrose (*Primula vulgaris*) is nearly ready to open; but as these plants are greatly influenced by the weather of the preceding autumn and by the covering which they may receive from the gardener, or from the snows of winter, they afford no definite indication of the season.

Nearly all our kinds of *Crocus* have come into bloom in the open ground. These plants are truly beautiful; and I must express my wonder that they are not more generally cultivated. They are very hardy, and will grow almost without care or attention from the gardener.

Bulbocodium vernum is a native of Spain. It appears to be hardy however; and though less splendid than the Crocus, it is well worthy of cultivation.

The Siberian Squill (*Scilla siberica*) as the specific name implies, is from a cold country. The late severe weather, which has defaced several other flowers, has left no traces of its visit on this little favorite, although it was in bloom twelve days ago. It has much resemblance to the hyacinth, but the stem is more slender; and I am tempted to add, it is more graceful in appearance.

The Mezereon came into flower on the 19th ultimo, and has suffered severely by the cold. Its bloom is nearly over.

As my chapter on flowers at this time is rather short, I will take the liberty to say something of plants that are only preparing to blossom; and in the first place of the Tree Pæonia: I have no other shrub that can compete with its growth at this season. One young shoot is already two inches in length; the blossom bud, as large as the end of my finger, may be seen among the expanding leaves; and what is rather unexpected (for we had been advised to cover them in cold nights) is, that they are not injured by the late severe frosts.

The Japan Quince is equally hardy, and vegetates almost as early. Its blossoms have been nearly ready to expand, for some days; yet I cannot perceive that the frost has damaged them in the least. From the circumstance that this shrub, as well as the Tree Pæonia, starts with the first mild weather in spring, I conclude that they are indigenous to regions where the winters are regular and severe.

The Crown Imperials have had a hard time. In a frosty morning their aspect is doleful, bending down as if in agony; and a person unused to them, might think them irrecoverably ruined. Nothing would be wanting however, to dispel the illusion but a warm sun, when they speedily raise their heads.

Last autumn, not long before its close, I had a bed prepared for some Hyacinths to the depth of eighteen inches,—as these flowers are always finest in a rich soil. After they came up this spring, the ground was hard frozen; and I soon observed that *the stems were separated from the bulbs*. This was effected by what is called *the heaving of the soil*. The leaves being frozen fast, were lifted; but the bulbs could not follow, and a separation ensued. The bed ought to have been prepared two months earlier, when it would have *settled* and become *compact*. Not more than one or two of those planted in the early part of autumn have suffered in this manner.

Diseases of Hogs.

If any of the readers of the Farmer can furnish the information asked for in the following letter, they will much oblige us, as well as the writer, by communicating it for publication:

MR. L. TUCKER—I am engaged in milling, and have kept a stock of about three hundred hogs in a large frame pen, divided into twenty-four rooms, with plank floor, and lodging rooms covered and boarded, leaving open only sufficient room for them to enter. They have been fed on bran, shorts, and course middlings. I have lost, during the last winter, about fifty—many of them were fat, and would weigh two hundred when dressed.

They were taken with weakness in the back, and lose the use of their hind parts—generally live from two to three weeks. On opening them, have always found a great many slim worms about an inch long in the leaf and about the back bone. I have tried all medicine recommended by farmers in this section, and in no instance had a cure.

I have a neighbor, who purchased a drove last fall, and has given them seven hundred dollars worth of corn, and the stock now left are not worth the first cost in consequence of the same disease.

You or your correspondents will confer a favor by giving me such information as you or they possess respecting a remedy.

Yours, respectfully, R. H. H.

Venice, Huron co., (O.,) April 2, 1834.

For the Genesee Farmer.

On Lime as a Manure.

The manner in which R. M. W. has expressed his opinion of the properties of lime, is so candid and unassuming that I am induced to offer mine, although it runs counter in several respects. A simple exchange of opinions in an agricultural paper, is greatly to be preferred to a controversy.

Carbon is one kind of food for plants, and it abounds in common limestone, forming the base of the carbonic acid; but it is not known that vegetables can abstract it from the lime. Lime, though generally combined with some acid, (as the acetic or phosphoric) also appears to be a constituent of most plants.

It has not been determined that gypsum acts by attracting the food of plants from the atmosphere. Sir *H. Davy* says "Very discordant notions have been formed as to the mode of operation of gypsum. It has been supposed by some persons to act by its power of attracting moisture from the air, but *this agency must be comparatively insignificant.*"

Slacked lime may be *either* the hydrate of lime, or the carbonate of lime. In the former state it is always *caustic*; in the latter, *mild*. In peaty soils where there is too much vegetable matter, lime should be applied in its caustic state; but in dry arable lands, where the vegetable fibres readily decompose, it is not necessary; and

mild lime may be even preferable. Caustic lime soon becomes mild however, when spread on the surface, or mixed with the soil. "Chalk and marl, or carbonate of lime," says Sir *H. Davy*, "will only *improve the texture of the soil* in relation to absorption: it acts merely as one of its earthy ingredients. *Quick lime when it becomes mild, operates in the same manner as chalk;*" and therefore it ought to be applied *in considerable quantities.*

I know of no reason for believing that gypsum as it occurs in our quarries was originally common limestone; and have not read any treatise on Geology in which that idea is advanced.

If sulphuric acid be poured on common limestone, the carbonic acid is expelled, and the sulphuric acid takes its place, thus forming gypsum. The new composition will consequently retain no affinity for carbonic acid.

Many years ago, on account of the scarcity of fuel in some parts of Scotland, limestone was pulverized in mills; and was found to be equally as valuable as burnt lime, where the caustic property of the latter was not requisite. It does *not* appear that its action is similar to that of gypsum.

Limestone is lime *saturated* with carbonic acid, and so is chalk,—the difference being in their *textures* and not in their *qualities*. Neither has any affinity for carbonic acid. A FARMER.

For the Genesee Farmer.

Live Fences.

Thy valuable correspondent, Cayuga, in the 13th No. of the Farmer, expresses a desire to learn the particulars of E. Hersey Derby's trial of the Honey Locust as a hedge. Subjoined is an extract from his communication, which appears in the 10th volume of the New England Farmer, page 137:

"For the last 20 years I have paid great attention to this subject, and will give you the result of my experience. The first hedge I set out (about 500 feet in length) was of the English hawthorn or quickset. The result was decidedly unfavorable. The plant is not adapted to this climate—it appears better suited to the moist atmosphere of England; our long summer drouth injures it; it is peculiarly subject to the attacks of the borer; a species of mildew or blight almost invariably assails it early in August, by which it loses its leaves, and by the middle of August or first of September assumes a wintry appearance.

"My next experiment was with the three thorned acacia, recommended by Judge Buel. The hedge was not more than 50 feet in length, but was placed in excellent soil and carefully attended. I had supposed that the long thorns with which the plant is armed, would have made it peculiarly efficacious as a fence. The result was even more unfortunate than before. Prune and clip it as I would, I could never make it grow thick; it appears to have a decided tendency to shoot upwards rather than to spread; the thorns grow only upon or near the upper branches, and below there was nothing but the bare stems to serve as a fence. It would often, too, lose as much during a hard winter, as it had grown during a whole summer. After a trial of near ten years I dug up the whole and replaced it with the American buckthorn, (Rhamnus catharticus.) With this I have been completely successful. It has, it is true, but few thorns, but it grows naturally so thick as to be a complete protection to the land enclosed by it. It shoots early in the spring, and holds its verdure till very late in the fall. If properly managed, it is so close below that a rabbit could scarcely work its way through; while above, the strong branches are so wattled and interlaced, that a man could not scale it, nor a bull force his way through it.

"I have now in different places at least half a mile of this hedge, which I shall be very happy to show to any of your correspondents who may wish to see it.

"The mode of cultivation is very simple—it is set out either in the fall or spring in the manner recommended by Judge Buel; if in the fall, it is clipped the next spring within about nine inches of the ground. Next spring it is clipped again at the hight of about two feet, the third spring at about three feet from the ground, with some side pruning. The next summer your hedge is complete, and you may keep it at the hight and thickness desired at the expense of a little pruning.

"I have also tried plashing. In 1818 or 19 my gardener, who was an Englishman, highly recommended it, and at last persuaded me to let him attempt it upon a young and thrifty hedge made of crab apple. He did it as it appeared to me very skilfully, but it was a very long and tedious operation, and the result was the hedge was ruined. His mode of operating (which is I believe the common one) was to suffer the main stem to remain upright, while all the side ones were partially cut and bent down nearly horizontally, and so confined either by interlacing or by staking them down; they did not thrive however—they perished by degrees, and I was at last forced to prune away all the horizontal branches, and lost at least four year's growth.

"With the buckthorn I have never found plashing to be in any degree necessary or useful. If managed in the way I have described, in three years the hedge will be complete, requiring afterwards very little care, and nearly as thick, and quite as impervious below as above."

Some deficiencies in the above article, are supplied at page 358 of same volume, as follows:

"Buckthorns should be set in a single row, from seven to nine inches apart; as soon as they begin to vegetate, they should be headed down to about six inches from the ground, which will cause the hedge to become thick from the bottom. By keeping the ground clean, and occasionally shortening the stray shoots, it will soon make a beautiful and efficient fence. It is an extremely vigorous, free growing plant, and in our opinion superior to any plant we are acquainted with in this country, for making a hedge."

The only buckthorn that I have seen in the western country, was standing a few years since in the garden of John Winslow, Scipio, where Cayuga may probably procure seeds.

Cayuga informs us that the borer has attacked the Yellow Locust in Cayuga county. I had not before heard of its depredations west of the mountains, and much regret that it has found its way to our country, but let it not discourage the cultivation of this valuable tree. ONTARIO.

Grubbing Plough.

In the last number of the Farmer, a subscriber inquires, "whether or not there is such an instrument now in *successful* use, among farmers, as the grubbing plough." This is an implement of husbandry I have never seen, therefore the object of the present communication is not to recommend any new invention of the kind, but to inform your correspondent of the manner in which I cleared a piece of ground which was grown up in bushes and undergrowth of various sizes from three to ten feet high: it was with a pair of oxen and a chain of ten to twelve feet long, with one end attached to the yoke, and forming a noose with the other around as many of the sprouts as could be encompassed by it, which when thus made fast, they drew out by the roots with great ease; it was in the spring while the ground was yet loose: it is probable the operation would not be so easy when the ground is dry and hard. Two active boys of fifteen years of age, will clear more ground in this way, than ten men will grub out in the ordinary method with mattocks.—*American Farmer.*

Culture of Potatoes.

From a communication in the *Northern Farmer*, by W. Claggett, we extract the following:

The old practice of making the potato hill in an oval form or the shape of a sugar loaf is very censurable. The same remark is applicable to the corn hill. Because, hills so formed do not absorb so much moisture, when the rains descend, as hills flat at the top.

It is believed that a former practice of planting small potatoes, is now universally condemned. But many are yet of opinion, that it is as judicious to plant cut potatoes, or slips or the eyes, as whole potatoes. This practice is contrary to the course of nature. Nature is always right, in all her operations. The Farmer should take nature for his great and unerring guide. Hundreds of various theories have been published upon this important point. The result of our observations and reflections respecting it is, that it is always best to plant the best potatoes whole, except those containing too many eyes, of unusually large size. The latter may be divided. I raised a potato, perfectly sound, of an oval form, weighing two and one half pounds. This I cut into twelve pieces, which from twelve hills yielded two bushels. If slips are planted, the plants or sprouts come up more slender and feeble. In favorable seasons, they may often yield very well, but not so well as those from the whole potato. Care should be taken to prevent the growth of too many sprouts or stalks. Four or five in a common hill are sufficient. The size of the potato depends much upon the number of stalks, and the size as well as richness of the hill. Potatoes degenerate by means of an improper mode of cultivation, and not from the climate. This vegetable of inestimable value contributes most to the health, growth and fatness of cattle after being boiled, or steamed. It ought never to be given to swine in a raw state, unless, probably, in the warmest season of the year, after being partially dried.

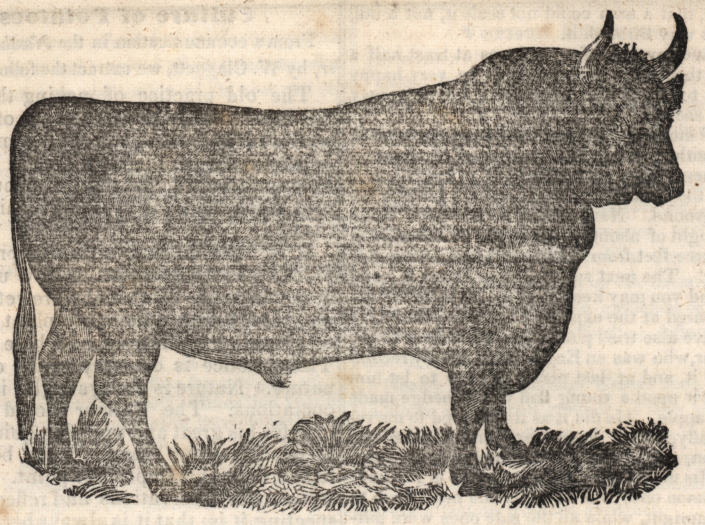
Cure for a Film in the Eye of a Horse or an Ox.

Edward S. Jarvis, Esq. of Surry, Me. in a letter to Mr. Joseph R. Newell, proprietor of the Boston Agricultural Warehouse, states as follows:

Have you ever heard of a cure for a film on the eye of a horse or an ox? I was told of one eighteen or twenty years ago, and have been in the practice of it ever since with perfect success. It was brought to my mind by just having had proof of its successful application in a calf that had its eye hurt by a blow from another creature. A film formed over it, and it was thought its eye was lost. But by turning into the opposite ear, a great spoonful of melted hog's fat, it was cured in 24 hours. I do not pretend to account for this, but I have seen it tried with success so often, that I think it ought to be made public, if it has not been berore. I learned it of an Indian.—*N. E. Far.*

ASHES.—A correspondent informs us, that from his own experience and the opinion of the best farmers, he is satisfied that a bushel of good ashes is worth a bushel of corn, to put on corn, flax, grass or a garden; and he is surprised that any person should continue the practice of selling ashes for pot-ash, at the trifling price of 8 or 10 cents a bushel.—*Hampshire Gazette.*

Time is a commodity of which the value rises as long as we live.



For the Genesee Farmer.

Cattle--No. VI.

THE DEVONS.

As this is one of the *improved breeds*, which is exciting such general attention at the present time among our own agriculturists, I shall be the more particular in its description and history, and I wish the reader constantly to bear in mind the suggestion in my last number, that the "grand secret of breeding is to suit the breed to the soil and climate."

The northern part of Devonshire has been long celebrated for a breed of cattle of the Middle Horn variety, beautiful in the highest degree, and in activity at work, and aptitude to fatten, unrivaled.

"From the earliest records, the breed has here remained the same; or if not quite as perfect as at the present moment, yet altered in no essential point until within the last thirty years. This is not a little surprising when it is remembered, that a considerable part of this district is not a breeding country, and that even a proportion of Devonshire cattle are bred out of the county on the borders of Somerset and Dorset."

"The truth of the matter is, that the Devonshire farmers were, until nearly the close of the last century, not at all conscious that they possessed any thing superior to other breeds; but like agriculturists elsewhere, they bought and bred without care or selection. It is only within the last fifty or sixty years, that any systematic efforts have been made to improve the breeds of cattle in any part of the kingdom; and we must acknowledge, that the Devonshire men, with all their advantages and with such good ground to work upon, were not the first to stir, and for some time, were not the most zealous, when they were roused to exertion. They are *indebted to the nature of their soil and climate*, for the beautiful specimens which they possess of the native breed of Middle Horns, and they have retained this breed almost in spite of themselves."

A spirit of emulation was at length kindled through the exertions of Bakewell and others, and the Devon cattle were brought to such a degree of improvement, and almost perfection, that take them all in all, they would suffer from intermixture with any other breed.

The more perfect specimens of the *improved Devons* are thus distinguished:

"The horn of the *bull* ought to be neither too low nor too high, tapering at the points, not too thick at the root, and of a yellow or waxey color. The *eye* should be clear, bright and prominent, showing much of the white, and a circle around it of variable color, but usually of dark orange. The *forehead* should be flat, indented and small, for by the smallness of the forehead the *purity* of the breed is very much estimated. The *cheek* should be small, the *muzzle* fine, and the *nose* of a clear yellow. The *nostril* should be high and open, the hair curled about the head, and the neck thick almost to a fault.

The head of the ox is small, and yet it has a striking breadth of forehead. It is clean, and free from flesh about the jaws. The eye is very prominent, with a singular vivacity of countenance. Its neck is long and thin, admirably adapting it to the collar or yoke.

"It is accounted one of the characters of good cattle, that the line of the neck from the horns to the withers, should scarcely deviate from that of the back. In the Devonshire ox, however, there is a peculiar rising of the forehead, reminding us a little of the blood horse, and essentially connected with the free and quick action by which this breed is distinguished.

"It has little or no dewlap. The horns are longer than those of the bull, smaller and fine even at the base, and of a lighter color, and sometimes tipped with yellow. Light in the withers; and shoulders a little oblique, the breast deep and the bosom open and wide. The fore legs are wide apart, looking like pillars which are to support a great weight.

"The legs must be *straight*. If they are *knock-kneed*, or crooked, in the fore legs, it argues deficiency in blood, incapacity for work and for grazing. The forearm is particularly large and powerful. It swells out suddenly above the knee, but is soon lost in the substance of the shoulder. Below the knee the bone is small, and the leg thin, and apparently rather long, showing strength and speed.

"There is a trifling fall behind the withers, but no *hollowness*, and the line of the back is straight. The hips are high and on a level with the back, whether the beast is fat or lean. The hind quarters, or the space from the hips to the point of the rump, are particularly long and well filled.

"The setting on of the tail is high, on a level with the back, and rarely much elevated and never depressed. The tail itself is long and small, and taper, with a round bunch of hair at the bottom.

"The skin is mellow, elastic, and rather thin, and covered with curly hair, and curly in proportion to the condition and health of the animal. Good judges speak of these curls as running like little ripples of wind on a pond of water. The favorite color is blood red. This is supposed to indicate purity of breed, but there are many good cattle almost chestnut, or even bay brown."

These are the principal points of a good Devonshire ox. The cow is remarkable for its comparative smallness, and yet she is more roomy than a careless examination would indicate. She is particularly distinguished for her full, round, clear eye, the gold colored circle around the eye, and the same color prevailing on the inside of the ear. The countenance cheerful, the muzzle orange or yellow, the jaws free from thickness, and the throat free from dewlap. The points of the back, and the hind quarters, different from those of other breeds, having more roundness and beauty, and being free from most of those angles by which good milkers are sometimes distinguished.

The above cuts* are fine exhibitions of the pure Devonshire breed, and for beauty and symmetry of form, and liveliness of expression, far excel any other breed now extant. "Their qualities may be referred to three points, their *working*, *fattening* and *milking*."

In their *working* capacity they have a quickness of action which no other breed can equal, and which very few horses exceed. They are also exceedingly docile and pleasant to handle. It is said, that four good Devonshire steers will do as much work in the field or elsewhere as any three horses, and in as quick or quicker time; and that it is a common day's work for four steers to plough two acres of fallow land. The principal objection is, that they have not strength sufficient for hard soils, "but they will exert their strength to the utmost, and stand a dead pull which few horses could be induced to attempt."

"Their next quality is a disposition to *fatten*, and very few excel them here. They do not indeed attain the great weight of some breeds, but in a given time they acquire more flesh, and with less consumption of food, and their flesh is beautiful in its kind. It is of that mottled, marbled character, so pleasing to the eye and to the taste." Many experiments have been made in England to test their fattening qualities, when compared with others, and the results have generally been in their favor, considering the quantity of food consumed. The Durhams acquire a larger bulk and perhaps more fat, but at the expense of much more food; and it seems doubtful which of these two breeds, all things considered, are preferable for fattening. The Herefords also have contested their claim to fattening supremacy, and are by many preferred to the Devons.

As *milkers*, the Devons are by no means superior, though they cannot be considered as much deficient, except in the *quantity* of milk. The milk is good, and yields more than an average proportion of cream and butter; but notwithstanding many of their admirers prefer them to all others for the dairy, still it is believed, they do not on an average equal the Ayrshires in quality, nor the Durhams in quantity. But after all, this is a contested point, while at the same time they possess so many positive excellencies, consuming so little food, and holding their milk so much longer than others, and are liable to so few diseases, that they are extensively cultivated and very generally admired.

One of the most zealous patrons and improvers of the Devons, is the Duke of Somerset, who has a large stock of the purest blood. The Duke of Bedford also, and Lord Somerville, have devoted much time and expense to their culture. Many

* [The cut of the Cow was accidentally so badly injured, as to render it necessary to procure a new one. It will be inserted hereafter.—*Editor.*]

private gentlemen, too, are engaged in their propagation in every part of England; and so great have been their success, that it seems now only necessary to exercise a judicious selection of the most perfect breed, to preserve it in its greatest purity.

Many crossess have been attempted, not only with the better kinds of Middle Horns, but with the Durhams, and they have invariably been attended, when persevered in, with the sacrifice of some valuable property. One cross with the Herefords, or with the Durham, has been at times attended with apparent betterment, but it will not answer to go farther, unless you are willing to destroy their activity, or beauty, or some other quality.

This is certainly a most valuable and beautiful breed of cattle. Their history and improvement exhibits a striking contrast to the Dishley breed of Long Horns. Here is no breeding "*in and in*" to arrive at perfection; no luxuriant feeding to produce excessive fat; and no transplanting to a more favored climate, to excite their growth. All is natural, spontaneous and vigorous. Acclimated by nature to the soil and climate, they are in themselves the clearest evidences of "*the grand secret of breeding.*"

There is no doubt but the original Devonshire cattle are extended more or less throughout the United States. In many parts of Massachusetts and Connecticut, they are still preserved in tolerable purity. The deep red color, and the lively vigorous step of pure Devons, may almost any day be witnessed in the streets of Hartford or of Worcester. But whether the *improved* cattle from the vales of Devonshire, Gloucestershire and Somersetshire in England, can be transplanted to our more rigorous climate, and to our varied soil and herbage, and still retain and perpetuate their excellent qualities, is a question far from being settled.

If soil and climate are so essential in the formation of a peculiar and improved breed, they certainly must be indispensable to its preservation; and therefore it must at all times be a subject of serious inquiry to the breeder, whether his cattle are adapted to his particular locality. If they are not, experience has proved, that in a few generations they will become acclimated, not only in form and size, but in quality, either losing or gaining peculiar excellencies or defects, according to their situation.

Is not here, then, an inducement for us to commence a systematic improvement of *our own* native cattle, rather than rely *too much* upon the acquired properties of foreign stock? And I would here venture a suggestion to *Ulmus*, whether he would not do himself greater credit, and his country more service, by traveling through the northern and middle states, and making the best selections from our native herds, and from thence, by culture, originating an improved AMERICAN BREED, every way adapted to our soil, climate and herbage?

QUERCUS.

For the Genesee Farmer.

The Balm of Gilead Poplar (*Populus candicans*) noticed a few weeks since by your correspondent W. G., is unquestionably a native of the American forest. The tree is found in various places in this part of the country, and are quite numerous on Squaw Island in the Niagara river. Neither do I suppose that an *Indian* or a *Squaw* ever planted them there, as the Island is low wet land and has never been under cultivation. This tree has been admired by some as an ornamental tree, but is more particularly valuable for its medicinal qualities.

B. H.

For the Genesee Farmer.

Manual Labor Schools--No. II.

In my last communication (page 99) on the subject of Manual Labor Schools, I proposed for a further number to consider the delays occasioned thereby to the student, consequent increase in expenses, &c. &c.

If it be granted that the body cannot be fatigued without affecting the mind, then whenever the student labors to fatigue, his studies will be irksome until he is rested; and that a person will continue his labor until overcome by fatigue, is far more certain, if he be required to labor only three hours in a day, than if he labored continually as a business. We farmers know well, that there is no profit in having a laborer whose mind is not upon his work; and it is also known that a boy whose mind is upon his play, or who had rather be at work on the farm, makes but poor proficiency in his studies. The mind cannot be occupied with but one ruling passion at a time—if it be labor, the labor only is profitable; if study, proficiency is in learning, and students are usually required to occupy about ten hours each day in study, recitations, &c. Now if three hour's labor be added thereto, the student's life is indeed a life of toil. There are some who can endure it, but with most the hours of manual labor will abridge their study, at least of close application, almost equal to the hours occupied in labor.

Of all mechanical pursuits, proposed as suitable for manual labor schools, none in my opinion ever promised so well as making flour barrels. The trade is soon learned; buildings, tools, stock, &c. not expensive; and where the location is good, sales ready, and at a fair price. When such a school was started at Rochester, it seemed if any thing of the kind could ever prosper, that must. Coopers are generally in better demand than other tradesmen, and the call for flour barrels immense. And why did this school fail? Was it for want of students, stock, or a market? Students were found in abundance. Staves and heading have not yet become scarce; and the market will never fail, while wheat is our staple commodity. Yet it did fail, for reasons unknown to me. I question whether there is not a recklesness, a want of care, a prodigality, in dressing stuff, which would always go far in reducing the profits of employing students in making barrels, or indeed in any mechanical operations, where lumber is to be cut in pieces.

At present farming appears to be the most popular business for manual labor schools. Let us examine the profits and loss in this business. As a pre-requisite, the farm must be large, well accommodated with buildings, out houses, teams, tools, &c. The location is also of great importance. If in an inland town, far removed from cities and populous villages, the produce must be such as requires a larger proportion of team labor, such as the raising of wheat, and grains that are easily transported to a distance. Gardening, and raising culinary vegetables, except for their own supply, would be of little use, no market being at hand. Now what will you set the student about? Will you set him a ploughing? but his hours do not apply well to using a team, besides who wants a team to be driven or used by such a variety of hands as must necessarily use them here! Will he take the care of teams? Too many cooks, &c. Will he mow, and make hay? hay must be made when the sun shines. Harvest wheat and the grains? These must all be done in their proper season, and all other business must give way for harvesting. In short, the farmer who accommodates himself to his business, is prosperous rather than he who makes his business accommodate him. The uncertainty of the weather, the season, the market, and competition of regular bred farmers, appears to me to operate against farming as a business for manual labor schools. Gardening, where a market is at hand for vegetables, &c. must be more pleasant and far more profitable.

Let me not be understood as condemning these schools *in toto*. There is a class of students for which they are well calculated—the rakes and spendthrifts of our colleges. Place these students under the severe discipline of a manual labor school; let them sow their *wild oats* in the open field, and there would be a prospect of their being reciaimed to become an ornament to society. But for the industrious, prudent young men, the sons of farmers, who have been taught lessons of sobriety and application, under the experienced eye of their sires, I would recommend the old fashioned chartered academies and colleges which have so long been an ornament and blessing to our country.

O. P. Q.

For the Genesee Farmer.

On the Use of Gypsum.

An opinion has obtained among many intelligent farmers in Virginia, that gypsum which has been ground for some length of time before it was used, becomes entirely inoperative in promoting the growth of vegetation. And one of the most distinguished agriculturists in the state, namely, Thomas J. Randolph of Albemarle, asserts that if there should be a drouth of four or five weeks continuance, after the plaster is sown, no perceptible effect is produced by its application.

In the course of my reading, I do not recollect to have met with the expression of a similar opinion; and if it be true, the fact is probably unknown to many of the farming community. Indeed I have heard of some farmers, who have recently made their purchases of plaster at the north, where the price is something less than it is here; and there was every appearance of its having been ground a considerable time.

If any of the correspondents of the Genesee Farmer have made observations which tend to confirm or refute this opinion, I would suggest the propriety of communicating the result to the public. I am aware that it may be said there is a test by which the purity of plaster may be ascertained; but perhaps a small proportion only of those who use it, have a knowledge of this test. The question is, whether plaster which has lain in a powdered state for a length of time, undergoes any change, chimical or otherwise, which neutralizes its active properties?

Some years ago, the practice of sowing plaster was in a considerable measure discontinued from a belief that there was no certainty in procuring

it of good quality. Another cause no doubt operated to some extent. By the injudicious use that was made of it, and the destructive system of depasturing, and otherwise abstracting from the land the luxuriant growth which sprung up under its stimulating action, a state of exhaustion was superinduced, from which it required some time to recover. At present it is again coming extensively into favor, and with the benefits of our former experience, there is no doubt that it will be a valuable agent in promoting the interests of agriculture.

The most approved application of it in this district of country, where we are frequently liable to long continued drouths, is to put it on the land at the same time, or before, or even shortly after the season for sowing clover seed. The crop of clover thus becomes assured, almost to a certainty; and the farmer is thereby saved from a disappointment which often befals those who are not blessed with soils of such fertility as to enable him to dispense with extraneous means to assist it. T. S. P.

Beaverdam, Va., 3 mo. 31, 1834.

N. Y. State Agricultural Society.

UNDER-DRAINING.

To J. Buel, Esq.

President of the N. Y. State Ag. Soc.

Sir—In reply to your letter of the 27th ultimo, in which you ask me to state to you the result of my experience of the utility and expense of under-draining farm lands, I have to observe that it is a subject to which I have devoted some attention for the few years during which I have had an interest in agricultural pursuits, and my opinion of its great utility is confirmed by every successive day's observation.

I have applied under-draining to twenty different fields, to the extent of more than two thousand rods, and compute the average cost at half a dollar per rod. The expense however is determined by the proximity of materials, and the economy with which the work is performed.

I am convinced the operative farmer who performs his own labor, can effect similar improvements considerably less than I have stated.

In some instances the state of my lands required an expenditure of at least twenty dollars per acre in draining. In such cases the production was coarse, unwholesome grasses, of little value, and tillage was quite out of the question. Twenty dollars per acre was the extent of the value of the land; whereas, after being effectually drained and cultivated, these lands have produced Indian corn, oats, wheat and clover in great luxuriance, paying an income on one hundred dollars the acre.

Every practical farmer is aware of the inconvenience and disadvantage attending the cultivation of fields, the different parts of which are so various as to preclude a uniform crop and uniformity of cultivation. Draining is the remedy for this.

As the improvement here treated of is of the most enduring nature, it would be unfair to charge the expense attending it upon the product of a single year. My belief is, that I have been fully remunerated by the increased products of three years in all cases; and further, in nearly every field I have, at the termination of the stone drains, durable supplies of water for animals, which, in my estimation, fully compensate the whole expense incurred.

Upon the whole, I know of no subject, connected with agricultural improvement, of more importance than draining; and if these facts I have detailed at your request should lead a single individual to experiment on this subject, I shall deem the hour occupied in the detail fully compensated.

I am, sir, very respectfully, your obe't serv't,

HENRY W. DELAVAN.

Ballston, Dec. 3, 1833.

GOOD AND BAD FARMING.

Galway, 18th Dec., 1833.

Dear Sir—In reply to yours of the 23d Nov. requesting some information in regard to the difference between good and bad farming, I submit the following facts:

When the land was first cleared in this town, being about forty-five years since, its timber consisted principally of beach, maple, elm, ash, and baswood. The soil produced good crops of all kinds; but the farmers neglecting to save and apply their manure, the consequence was that their crops decreased, and in about twenty-five years the land would not produce more than one half as much, on an average, as when it was first cleared, and this half cost them more labor than when they got double the quantity of grain or grass.

The land I now till, at first, would not produce on an average, more than fifteen or twenty bushels of corn, ten or fifteen bushels of wheat, barley or rye, and from half a ton to one ton of hay per acre. I commenced making, saving and applying my manure in the most economical way on the surface, and ploughing shallow; and in ten or twelve years I found I had brought it back to its original state of fertility. My practice has been to turn over the sod in the fall or spring, spread eight or ten tons of barn yard manure on an acre, and then plant with corn; and to follow the corn with barley and grass seeds, putting 3 lbs. clover and 4 of timothy seed on an acre; then let it lay two years to grass; then to go over with the same rotation of crops; and my third rotation was first wheat, second corn, third barley, to seed down with, applying about the same quantity of manure every time I turned over the sod. In this way, in the course of twenty years, I got some of my fields to yield from eighty to one hundred bushels of corn, thirty-five to forty bushels of wheat, fifty to sixty bushels of barley, and from two and an half to three and an half tons of hay per acre, and with less labor, except in harvesting, than when I did not raise only about one third or one quarter as much. I know from my own experience, that it does not cost one half, if more than one third as much, to raise a bushel of grain by good husbandry, as it does by bad management.

The farmers have much improved their farms in this town since our state agricultural society was organized, and of course their crops have increased in proportion. *I have no doubt that the money which was appropriated by the state to encourage agriculture, has increased the wealth of this county* MORE THAN TWENTY PER CENT A YEAR *since*, yet there seems to be a want of enterprise with our farmers in promoting their true interest.

The crops in this town were generally good the last season, except corn, which owing to the unusually wet and cold season, did not yield more than one third or one half of a usual crop. I planted a field of four acres, which was in my highest state of cultivation. Occupied as pasture, I turned over the sod about the first of June, and planted it two feet eight inches apart, with eight rowed yellow corn. When the stalks were fit to cut, I had the curiosity to ascertain the weight of the corn and stalks on an acre, and found that I had 38,000 lbs., and 26,000 ears of corn. This was the heaviest growth I think that I ever raised, and I have no doubt that there was 150 or 160 bushels corn when fit to crib.

Respectfully yours, EARL STIMSON.

J. Buel, Esq.

Irrigation, or Watering Land.

It will be proper at or about this time to give a very particular attention to your water courses, and other means of watering your land. Some writers advise not to admit water on grass ground till late in the spring, or till the crop begins to feel the effect of drouth. But we believe this to be erroneous. One of the principal objects of irrigation is to make use of water as a *carrier*, to convey certain substances to the soil, which may have a tendency to enrich it. When this is in view the water should be made use of when the streams are high and muddy, which generally happens at the time the snow is melting. At that season the water is surcharged with fertilizing particles. Moreover, many temporary streams, laden with manure, or rich earth, perhaps oozing from dung heaps or escaping from a cow yard, may, with a little attention, be made to deposit their burdens in places, where they would greatly benefit the land and the crops of the owner of the premises. No good cultivator will suffer any more of the wash of his soil to glide away from his premises than he can avoid, before it has been arrested, and in part absorbed, and forced to leave its *food for plants* behind it.

When water stands high in brooks, rivulets, &c. it may be carried over higher parts of a farm than could be in dry seasons, and spread where its deposites are most needed. It should be made to run in courses or channels, which have no more descent than is necessary to prevent its becoming stagnant. If water intended for irrigation moves slowly, it leaves its riches behind it; if it runs rapidly, it carries away the farmer's riches with it. In the first case it is an auxiliary or purveyor, in the second a robber of the soil. Perhaps horizontal furrows drawn at proper intervals, with the aid of some implement like that of which we gave a drawing and description in our first volume, (page 14,) may be found useful in some cases, in detaining water and preventing its passing too rapidly over land which is sloping or situated on a declivity. Or the system mentioned in the code of agriculture may be pursued, in which, "after water is brought from the original stream into a new cut, it is stopped at the ends, so that when the trench is full the water is compelled to run out at the side and flood the land below it. But as the water would soon cease to run equally for any considerable length, and would wash the land out in gutters, it has been found necessary to cut small parallel trenches, at the distance of from 20 to 30 feet to catch the water again, and the same plan of spreading and diffusing is continued till the water reaches the main drain at the bottom of the meadow."

When the chief object of irrigation is to add to the soil the substances suspended in the water, it may be well, when practicable, to take the water out of the stream as near the bottom as possible. The water in proportion to its depth will convey a larger or smaller quantity of mud, and other fertilizing matter. Trunks, gates, &c. may be so contrived in many instances, as to afford the lower strata or layers of water instead of the surface of the stream.

Much good may be effected by farmers in ma-

ny situations, by making a judicious use of the wash of large roads, especially early in the spring. At that time the water, composed chiefly of melted snow and ice, is thick and turbid with the manure, dropped in the snow path of the preceding winter. A little attention, with nothing more than a common hoe, may sometimes enable a farmer to manure acres, with the foul water of a highway, with a small expense of time and labor.—*N. E. Far.*

From the New-York Farmer.

Forcing Asparagus.

Mr. Feeet,—After visiting your market at New York, I am rather surprised at the little attention paid to forcing that useful vegetable the Asparagus, which I deem one of the first importance to the market gardener. The mode of forcing being simple, and the produce generally satisfactory, I trust a few practical remarks on the subject will be acceptable to some of your readers.

As soon as the frost is out of the ground, let a very moderate hot-bed be made, of any convenient size, with hot horse manure; the frame being placed on it in the usual manner, cover the bed three inches thick with earth, whereon the asparagus roots are to be placed, taken from an old bed or nursery rows three or four years old. The roots will require no trimming, but merely placed as thick as possible in the bed, so that the crowns are not placed on one another. This done, they are to be covered three inches with light soil or tanner's bark, when the sashes may be closed to draw the heat; but care must be taken not to let the lights remain on a day after the heat begins to rise, when six or eight inches more of light earth may be covered over the bed. The treatment is simply to give plenty of air in the day, and moderately covering the frame at night; to keep out the frost is sufficient. After the bed has been planted ten or twelve days, the roots will begin to vegetate, when a good watering is to be given every other day; and in three weeks after the time of planting, a good supply of asparagus will appear, and continue, if properly managed, from twelve to fifteen days.

Edward Sayres.

Hyde Park, March 25, 1834.

Domestic Economy.

There are some simple questions in domestic economy, which are worthy the attention of all our farmers and agricultural men. They relate immediately to the importance of possessing good stock, and valuable species of animals, which appear to excite but little attention in most agricultural communities. Cows which yield only their ten quarts of milk per day to one man, are certainly much less productive than his neighbor's animals, which perhaps, with the same expense in labor and keeping, yield him his twenty quarts. The profit of two dairy farms, where the relative difference between the animals is in such striking disproportion, would astonish every individual when ascertained at the termination of the year. Yet this is hardly an imaginary case. Regardless of considerations like these, a large number of poor, comparatively worthless animals are kept by our farmers, who cannot be impressed with the great importance of substituting better and more profitable beasts in their stead.

But sheep husbandry will illustrate this principle more fully. A. has a flock of eight hundred Saxony or Merinoes, which yield four pound at each shearing, making the product of his flock 3200 pounds annually. At the price for which wool is now selling in Boston, say 75 cents, the proceeds of A.'s sheep would be $2400; B. his neighbor has an equal number of sheep, though of an inferior quality, but requiring the same food and attendance as A.'s. They will yield perhaps 3 pounds to a fleece, giving annually 2500 pounds. This sort of wool at 40 cents, the present price, will yield B. $960, making a difference of $1500 between the productive character of A. and B.'s sheep. Now it is one of the first principles in political economy to obtain from the smallest surface of soil or specific number of animals, the greatest amount of grain. By comparing the products of the two flocks of an equal number owned by A. and B. is not the difference, to a discriminating mind, most astonishing?

The above simple exposition of the profits on Cows and Sheep of different kinds, will apply with much the same force to all animals kept by farmers. An experienced individual who is intimate with the details of raising sheep, suggests to us the absolute importance that they should be kept well. Indeed the same remark applies to all animals, from whom profit in the shape of periodical produce is expected. Cows from an insufficiency of food, or that of an inferior quality, deteriorate both in kind and quantity of their milk, which surely is wretched economy, and Sheep, with inferior food and but half enough of it, not only diminish most essentially the amount of wool they yield, but they are unable to sustain their lambs, and the natural consequence follows, they die.—*Northampton Cour.*

Charcoal Dust.

Thomas Smith, a writer for Loudon's Magazine, observes, "For the last six years I have had most excellent crops of onions, and not the least appearance of any infection. My first experiment I made on a bed fifty feet long and five feet wide, prepared in the usual way, one half of the bed was dressed with charcoal dust and the other half without it. The part on which the dust was laid, had an excellent crop of onions, it remained quite clean and free from disease, while the part to which the dust was not applied, was entirely destroyed by the grub and by mouldiness," &c. He then relates another similar experiment with a similar result. The charcoal dust was "spread upon the top of the ground intended for onions, about half an inch thick before the seed was sown (the ground being previously well dug and manured,) and merely scuffled in with the point of a spade, so as to mix the top soil and charcoal dust together."

"The charcoal dust ought to be kept quite dry, which is easily done by placing it in a round heap and covering it closely over with turf till it is wanted." It likewise seems from experiments made by the same gardener, that charcoal dust is a remedy against "the clubbing in the roots of cabbages."—*N. E. Far.*

Apple Trees.

A gentleman in Essex, England, having in his orchard many old supposed worn out apple trees, which produced fruit scarcely larger than a walnut, last winter took fresh made lime from the kiln, slaked it with water, (without allowing time for its caustic quality being injured by imbibing fixed air) well dressed the trees, applying the lime with a brush. The result was, that the insects and moss were completely destroyed, the outer rind fell off, and a new, smooth, clear one formed; and the trees, although some twenty years old, have now a moist, healthy appearance. The same treatment may be extended to other fruit bearing trees, and probably with a beneficial result.

Examination of a Horse's Eye.

People in general turn a horse's head to a bright light to examine his eye. You can know very little, by this method, what sort of an eye a horse has, unless it be a very defective one. You must examine the eye first, when the horse stands with the head to the manger. Look carefully at the pupil of the eye of a horse; it is of an oblong form; carry the size of a pupil in your mind, and then turn the horse about, bring him to a light; if the pupil of the eye contracts, appears much smaller than it was in the darker light, then you may be sure the horse has a strong, good eye; but, provided the pupil remains nearly of the same size as it appeared in the darker light, the horse has a weak eye; therefore have nothing to do with him. There are contracting and dilating muscles in the eye which will plainly show you in what state the eye is, whether it be a strong or weak one.

List of Subscribers

Who have paid for the 4th volume of the Genesee Farmer.

P. R. Skinner.	Aaron K. Owen.
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David Lynch.

The following have paid to July 1, 1834.

Elisha B. Strong.	Daniel Burgess.
Z. Macomber.	J. Drew.

PRICES CURRENT.

ARTICLES.	PER	*April* 18. ROCHESTER.	*April* 14. NEW-YORK.
Ashes—Pot....	100lbs.	$3,25.....	$4,30 a 0,00
—— Pearl..	.....	3,50.....	4,60 a 4,65
Beeswax, yellow	lb.	0,16 a 0,18	20 a 21
Candles, mould	.....	0,10 a 0,12	13. a 14
—— dipped.	.....	0,10a0,10½	11 a 12
Cloverseed.....	.....	6½..... ...	6½.a.6¾
Flax, American.	.....	.....	8..a.8½
Flax seed, clean	tierce	9,00a10,00	10,50a11,00
Flour, Western.	barrel	4,75.....	5,44 a5,62
Grain, Wheat..	bushel	0,81.....	1,05 a1,10
—— Rye....	.....	0,62.....	50..a..52
—— Oats...	.....	0,25..a..27	30..a..34
—— Corn...	.....	0,46.....	52..a..54
—— Barley..	.....	0,50..a..56	70..a..71
Hemp, Americ'n	ton	.....	100 a 125
Hops, 1st sort..	lb.	.....	17..a..18
Plaster Paris...	ton	6,00 a 0,00	2,75 a0,00
Beef, Mess....	barrel	0,00 a10,00	8,75 a9,50
—— Prime....	.....	0,00 a8,00	5,50 a 5,75
Pork, Mess....	.....	14,00a15,00	12,50a14,25
—— Prime....	.....	11,00	9,12a10,50
—— in the hog.	100lbs.	4,00.....	.....
Hog's Lard....	.....	8,00 a 9,00	6,50 a 8,50
Tallow.....	.....	7,50 a 8,00	7,50.....
Hay.....	ton	6,00 a 7,00	12,50a15,00
Apples.....	bushel	25..a..50	.....
Potatoes.....	.....	18..a..25	.....
Cheese.....	lb.	6..a...8	7½..a..09
Butter.....	.....	12..a.14	15..a..17

Flower Seeds.

The Publisher of this paper has received from Wm. Thorburn, Seedsman, Albany, an assortment of Annual and Perennial Flower Seeds, comprising 53 sorts. These Seeds were raised at the *Albany Nursery* the past season, and are neatly done up in labelled papers—price 6 cents per paper.

March 28, 1834. L. TUCKER.

Plaster.

The subscriber is prepared to furnish any quantity of the first rate Plaster from the beds in Phelps, on the most favorable terms. It will be delivered at any place on the Canal immediately after the commencement of navigation. Gentlemen wishing to purchase are invited to make application to the subscriber at Newark, Wayne co. or to Luther Tucker, at the office of this paper.

C. S. BUTTON.

March 28, 1835. mar 28

COBB'S MANUAL OF CULTURE OF SILK, &c. for sale by

HOYT, PORTER & Co.

Night-Blowing Flowers.

BY MRS. HEMANS.

Children of night! unfolding meek, slowly,
To the sweet breathings of the shadowy hours,
Where dark-blue heavens look softest and most holy,
And the glow-worm light is in the forest bowers;
To solemn things and deep,
To spirit-haunted sleep,
To thoughts, all purified,
From earth, ye seem allied,
O, dedicated flowers!

Ye, from the crowd your vestal beauty turning,
Keep in dim urns the precious odor shrined,
Till steps are hushed, and faithful stars are burning,
And the moon's eye looks down, serenely kind!
So doth love's dreaming heart
Dwell from the throng apart;
And but to shades disclose
The inmost thought which glows,
With its pure life entwined.

Shut from the sounds in which the day rejoices,
To no triumphant song your petals thrill;
But yield their fragrance with the faint sweet voices,
Rising from hidden founts when all is still,
So doth lone prayers arise,
Mingling with secret sighs,
When grief unfolds, like you,
Her breast, for heavenly dew,
In silent hours to fill.

The Riukenfoss.

We extract the following description of this stupendous cataract from a review of "Travels in Holland, Denmark, Norway, &c. by Charles Boileau Elliot Esq. of the Bengal civil service."

Mr. Elliot, being desirous of seeing that wonderful cataract, the *Riukenfoss* contrived to include it in his route from Christiana to Bergen. Since this has been mentioned by several authors, as more magnificent than the Falls of Niagara, we turned to his description of it with a keen interest; but as he has not mentioned the depth and width of the river, we are not fully satisfied We find, however, from another account, that the body of water, if not equal to that of Niagara, is yet so prodigious, that it is surpassed in magnitude by few cataracts in the world; so that when the hight of the fall is considered, it must be regarded as one of the grandest scenes in nature. As Niagara is computed not to exceed one hundred and sixty feet in hight, we can easily imagine that the Riukenfoss may have a more imposing aspect. The following is the account given by Mr. Elliott, of the visit paid by himself and his traveling companions to this stupendous scene.

"For four miles we scrambled over rocks, where, in places, there was nothing more than a ledge just large enough to catch the side of the foot. The scenery is grand beyond description. The mountains on either sides of the valley are covered to the very summits with wood; while, in the middle, the river rolls in angry waters through a rugged channel whose inclination augments constantly their velocity. At length we reached the Foss. I do not remember to have seen a sight so calculated to inspire terror. The Moen rushes through a rock blackened by time, and falls from a hight of *four hundred and fifty feet* perpendicularly, into a cauldron of the same dark material. The foam or *riuken*, rises so high as to conceal from the distant spectator the depth of the fall, which we could duly appreciate only when lying on the ground and looking over the edge of the precipice at its highest point. Whether real or fancied, the earth seemed to tremble under the concussion of the continuous torrent. At this moment the sun burst from behind a cloud, and shining upon the falling water and the playful spray, cast obliquely on the dark back ground a perfect double rainbow approaching nearly to a circle. The effect was exceedingly striking. Placed in the only point where the circumstance was incomplete, we saw ourselves clothed with the rainbow. Unprepared as we were for so extraordinary a position, it was too sublime; and we almost shuddered at the glory of the vesture with which we were surrounded; while in the beauty and grandeur of this master-piece of His hand, we recognized the power of Him, who weigheth the mountains in scales, and covereth himself with light as with a garment."

Selections.

Grass Seeds.—It is very probable that the farmers of this country, in confining their attention exclusively to clover and timothy, do not realize as much hay and pasture as they would from a greater variety sown in the same field. In England the quantity sown to the acre for mowing is ten pounds of red clover, two of white do., two of yellow do., and one bushel of annual rye grass. For pasture, four of red clover, six of white do., four of yellow do., and one bushel of perennial rye grass. In this country grass seed is not generally sown later than the 15th of April.—*N. Y. Farmer.*

Botts in Horses.—This is the season in which these worms are injurious to horses. Horses that have their food frequently seasoned with salt are said to be less liable to injury from them. Since botts seem to be fond of sweet liquids, it may be an advisable precaution to administer molasses with their food.—*Ib.*

The Chinese Mulberry.—We should advise every farmer to obtain at least one of the Morus multicaulis. It will not cost more than fifty cents; and by taking cuttings, or by laying, he may next spring have some ten or twenty plants.—*Ib.*

Lime as a Manure.—"Lime," observes Mr. Lambert in his excellent work on Ireland, "is peculiarly adapted to land full of weeds and roots, as it decomposes such."—"It is a better manure for wheat probably than any other crop; and the quality of wheat grown on land where it is applied is much improved, having a thinner skin, a better color, and yielding more flour."—"It may be freely applied to land devoid of much calcareous matter."

Lime should, as much as possible, be kept to the surface-soil: it readily sinks if ploughed in too deep. Though I have mentioned what many may think very heavy dressings of this manure, yet I have known good effects produced from a far lighter quantity; and I should say, it is safer to begin with a moderate dressing, which can always be increased if found necessary, than to over-dose at first. It is essential that the lime should be well slaked, and in a powdery state before spreading. To this end, if the weather chance to be dry, cover up the heaps with mold for a day or two, they will open as fine as if water slaked.

An Improvement in the Mode of Raising Annual Flowers.—After sowing the patch of seeds, and covering it with fine moist soil, place a garden pot inversely over it, until the seeds have struck root; then raise the pot two or three inches, keeping it thus supported for a few days, and then remove it entirely. The pot not only keeps the soil moist, but by the sun heating the pot, the seeds come up much more quickly than otherwise they would do, in consequence of which the seeds need not be sown so early by a fortnight or upwards. The young plants are therefore less exposed to injury from cold or severe frosts. Hollow tiles, instead of pots, answer equally well, except that, where mice are, they have access to the ends.—[Gardener's Mag.]

Clover among Corn.—A friend of mine sowed red clover among his corn after going through with the cultivator the last time, the seed was protected from the heat of the sun by the corn, it consequently vegetated very soon, and after the corn was cut off, there was a luxuriant growth of clover, which afforded fine pasture for several successive seasons. The red clover is an excellent manure: I have raised a fine crop of wheat, by ploughing in the second growth after harvest.—[Am. Farmer.]

Moths.—About the last of May or the first of June, the little millers which lay moth eggs begin to appear. Therefore, brush all your woollens and pack them away in a dark place, covered with linen. Pepper, red cedar chips, tobacco,—indeed, almost any strong spicy smell is good to keep moths out of your chests and drawers; but nothing is so good as camphor. Sprinkle your woolens with camphorated spirit, and scatter pieces of camphor gum among them, and you will never be troubled with moths. Some people buy camphor wood trunks for this purpose; but they are very expensive, and the gum answers just as well.

Cheap Dahlias, Chinese Mulberries, &c.

WILLIAM PRINCE & SONS, Flushing, having greatly increased about 300 of their splendid varieties of Dahlias, now offer them at the follwing *reduced prices*, and they are ready to supply *five thousand* immediately at these rates:

Double Dahlias, 12 distinct varieties, with their names, comprising such sorts as have been most increased, for $3 00

Double Do., 12 distinct varieties, with their names, comprising kinds more rare and beautiful, or $4 50

Double Do., 12 distinct varieties, with their names, comprising such kinds are still more rare and extremely beautiful, $6 00

In addition to the splendid collection which last season covered an acre of ground, every new variety of great celebrity has been recently imported from Europe, and the *Amateurs* may now have their utmost wishes gratified. at prices reduced to accord with the times.

Levick's Incomparable, with scarlet petals tipped with white, now offered at $2,50

Chinese Mulberry, or Morus multicaulis, at $25 per 100, or $4,50 per dozen.

Twenty-five busheles new Italian Rye Grass; 50 do. Pacey's Perennial do.; 100 do. English Potatoe Oats and Early Angus do.; 1500 lbs. superior Province Lucerne; 150 lbs. Tripolium incarnatum, and various other Seeds. The prices of Roses, and of various Fruit and Ornamental Trees, &c. have been much reduced. Catalogues will be sent to every applicant, and all packages will be shipped precisely as directed, and with particular dispatch.

Linnæan Garden and Nurseries, April 3, 1834.

apr 12-2t

MONROE GARDEN AND NURSERY.

GREECE, NEAR ROCHESTER, N. Y.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous, Perennial Plants, Bulbous Roots, &c.

Also, a few hundred of the Morus Multicaulis or Phillipine Mulberry, the white Italian Mulberry by the hundred or thousand, English Hawthorn Quicks, Grape Vines of both native and foreign varieties, mostly of large size, for sale by the single vine, hundred or thousand at reduced prices The subscriber has a large Green House well filled with a large collection of choice Green-Hous Plants in good condition.

All orders, by mail or otherwise, wil be promptly attended to, and packages delivered in Rochester or at the mouth of Genesee River.

ASA ROWE.

Orders for Mr. Rowe's Nursery received by the Publisher of this paper.

Catalogues may be had at the office of the Genesee Farmer—will be sent to those who wish them gratis October 5, 1833 f6m

Valuable Sheep for Sale.

THE subscriber having more SHEEP than he wishes to keep through the summer, will on or before the first of June next, sell about eighty of his fine wooled Ewes with their lambs. Farmers wishing to commence or increase their flock of sheep, will seldom meet with as profitable a lot of Ewes. The greater part of them have been raised from rams from the flock of the Hon. R. S. Rose, and the lambs to be sold with them are from rams selected from the above mentioned flock, which for quality of wool, is not excelled in the United Sates. The subscriber has also 135 three and four year old Wethers of the first quality, which he will sell about the same time. JOHN JOHNSON.

Fayette, Seneca County, Feb. 7, 1833. feb 8-f3m

Sap Buckets.

2000 SAP Buckets for sale at the Rochester Pail, Tub and Churn Factory near Frankfort market, State-street.

3 mo. 18th 1834.—mar 1-f1m